

## In the Claims

- 1 1. (original) A method for modeling a graphics object, comprising:
  - 2 providing a model of the graphics object;
  - 3 generating a first adaptively sampled distance field for the model;
  - 4 constructing a topological hint;
  - 5 generating a second adaptively sampled distance field for the
  - 6 topological hint;
  - 7 sampling first locations of the second adaptively sampled distance
  - 8 field to determine a corresponding topological feature for each location;
  - 9 determining second locations in the first adaptively sampled distance
  - 10 field from the corresponding topological features of the second adaptively
  - 11 sampled distance field; and
  - 12 sampling the first adaptively sampled distance field at the second
  - 13 locations to determine a distance value for each of the second locations to
  - 14 model the graphics object according to the topological hint.
- 1 2. (original) The method of claim 1 wherein the topological features are
- 2 distance values of the second adaptively sampled distance field, further
- 3 comprising:
  - 4 generating a third adaptively sampled distance field from the distance
  - 5 values at each second location.
- 1 3. (original) The method of claim 2 further comprising:
  - 2 rendering the third adaptively sampled distance field.

- 1    4. (original) The method of claim 1 wherein the topological hint is
- 2    constructed from graphics primitives.
  
- 1    5. (original) The method of claim 4 wherein the graphical primitive has a
- 2    corresponding implicit function, and the second adaptively sample distance
- 3    field is generated from the implicit function.
  
- 1    6. (original) The method of claim 1 wherein the topological hint is
- 2    constructed from a plurality of graphical primitives, and further comprising:
- 3       generating a primitive adaptively sampled distance field for each
- 4       graphics primitive;
- 5       combining the plurality of primitive adaptively sampled distance
- 6       fields to generate the second adaptively sampled distance field.
  
- 1    7. (currently amended) The method of claim 6 wherein the combining
- 2    includes CSG (CSG) operations.
  
- 1    8. (original) The method of claim 1 wherein the topological features are
- 2    distance values of the second adaptively sampled distance field, and the
- 3    distance values of the first and second adaptively sampled distance fields are
- 4    combined.
  
- 1    9. (currently amended) The method of claims claim 1, 2, 5, and or 6 wherein
- 2    the generating comprises defining a candidate cell of the adaptively sampled
- 3    distance field, determining and storing distance values of the candidate cell
- 4    in a bounded distance tree, recursively subdividing the candidate cell into
- 5    subdivided cells of the adaptively sampled distance field while determining

- 6 and storing corresponding distance values of the subdivided cells in the
- 7 bounded distance tree until a termination condition is reached, and
- 8 appending the distance values to the corresponding cells to generate the
- 9 adaptively sampled distance field of the object.